

REMARKS:

Claims 3, 5 to 7, and 9 to 22 are in the application, with claims 1 and 2 having been cancelled. Claims 3, 7, and 22 are the independent claims herein. Reconsideration and further examination are respectfully requested.

All pending claims were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,315,580 (Phaal). Applicants respectfully traverse this rejection.

Claims 3:

Claim 3 recites a system including an input port for receiving network packets and a sampling element for selecting a fraction of those packets for review. The sampling element includes a feedback element for adaptively altering the fraction. The system also includes a queue of selected packets, a packet-type detector coupled to the queue, and a frequency measurement element coupled to the packet-type detector. According to amended claim 3, the feedback element is responsive to a length of the queue.

The applied art, namely Phaal, is not seen to disclose or to suggest the foregoing features of claim 3, at least with respect to a feedback element for adaptively altering a fraction of packets selected for review.

In more detail, the Examiner correctly noted that Phaal teaches sampling means that selects packets in a deterministic manner either on the basis of selecting every nth packet or on the basis of selecting a first packet detected after a fixed interval. However, neither of these

operations is understood to involve any use of feedback whatsoever in determining what packets are selected. In particular, Phaal is not seen to disclose any use of feedback in selecting the value for “n” or for the fixed interval.

Phaal also teaches sampling the packets in a “statistically random” manner. This random sampling also is not seen to involve any use of feedback whatsoever in determining what packets are selected. In fact, in the preferred embodiment disclosed by Phaal, the random sampling is controlled by “a table of random count values predetermined according to an exponential distribution” (col. 4, lines 45 to 47, of Phaal). Clearly, use of predetermined values is completely different from use of feedback.

Applicants also note that neither the Office Action nor Phaal even includes the word “feedback.”

Thus, Applicants submit that Phaal does not teach or even suggest claim 3’s feature of a feedback element for adaptively altering a fraction of packets selected for review. Claim 3 is therefore believed to be allowable over Phaal, and such action is respectfully requested.

Claim 7:

Claim 7 recites a method including steps for sampling a set of packets at a network interface of a switch. The steps for sampling including steps for adaptively altering a fraction of the packets for selection. The steps for adaptively altering a fraction of the packets for

selection include steps for maintaining a queue of selected packets, and altering the fraction in response to a length of the queue.

The applied art, namely Phaal, is not seen to disclose or to suggest the foregoing features of claim 7, at least with respect to altering a fraction of packets for selection in response to a length of a queue of selected packets.

As discussed above, Phaal teaches sampling of packets in a deterministic manner either on the basis of selecting every nth packet or on the basis of selecting a first packet detected after a fixed interval. Phaal also teaches sampling the packets in a “statistically random” manner. However, none of the types of sampling disclosed by Phaal is believed to involve adaptively altering a fraction of the packets for selection in response to a length of a queue of selected packets, as recited by claim 7.

In particular, Phaal is not seen to teach that the value for “n” is adaptively altered. Likewise, Phaal is not seen to teach that the interval is adaptively altered. Finally, Phaal’s “random sampling” based on predetermined count values is believed to be completely different from adaptive altering of a fraction of packets for selection. Clearly, use of predetermined count values is entirely different from use of adaptive alteration.

Thus, Applicants submit that Phaal does not disclose or even suggest claim 7’s feature of altering a fraction of the packets for selection in response to a length of a queue of selected packets. Claim 7 is therefore believed to be allowable over Phaal, and such action is respectfully requested.

Claim 22:

Claim 22 recites a system including means for collecting aggregate information about network traffic, and means for maintaining processor load relatively constant for a processor controlling the means for collecting despite substantial variation in network traffic. The means for collecting and the means for maintaining include an input port for receiving network packets, a sampling element for selecting a fraction of those packets for review, the sampling element including a feedback element for adaptively altering the fraction, a queue of selected packets, a packet-type detector coupled to the queue, and a frequency measurement element coupled to the packet-type detector. In claim 22, the feedback element is responsive to a length of the queue.

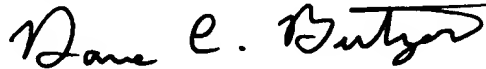
The applied art, namely Phaal, is not seen to disclose or to suggest the foregoing features of claim 22, at least with respect to a feedback element for adaptively altering a fraction of packets for review. Accordingly, claim 22 is believed to be allowable, and such an indication is respectfully requested.

Closing

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at (614) 486-3585. All correspondence should continue to be directed to the address indicated below.

Respectfully submitted,

A handwritten signature in black ink, reading "Dane C. Butzer". The signature is written in a cursive, flowing style.

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Changes to Claims

Pursuant to 37 C.F.R. § 1.121(c)(ii), changes to any claims effected by the accompanying paper are indicated below.

Claims 1 and 2 have been cancelled.